

Old Management Notions Called Outdated

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NEW YORK, April 5—Seventy-five years of management ideas must be discarded if industry is to get high productivity out of factories run by computers, scientists said today at a computer conference here.

Seymour Melman, a Columbia University engineering professor, said that the effects of trying to computerize the work place without changing outmoded notions of how to manage a factory can be disastrous.

One of America's largest car companies, he said, has two plants that make engines and transmissions for testing. They are nearly identical.

In one factory, the workers have been trained in computer programming and have the authority to control the computerized machine tools.

That plant is operating at 97 percent of capacity and has very little worker turnover.

But in the other plant the computerized machine tools are locked up so that only managers can change the programming. Workers have only an on/off switch to operate. All planning, scheduling and maintenance are in the hands of management. That plant is operating at less than 50 percent capacity and has higher turnover than its sister plant, Melman said.

Melman said that the computerization of factories can raise new issues of worker responsibility because workers in computerized plants either have virtually no responsibility or must be given enough knowledge and authority to help manage factory operations.

For three-quarters of a century industrial management has been

dominated by "Taylorite" ideas, the dries advanced by Frederick W. Taylor. Taylor thought that manual work must be kept extremely simple and repetitive, to suit the abilities of workers, whom he said were mentally and physically like oxen.

All brainwork, Taylor said, should be removed from the factory floor and be left to managers.

This notion, said Harley Shaiken, a technology and labor analyst for MIT, who also spoke at the meeting here, has led to a hierarchy in which work and the product are belittled while management and distance from the shop floor are the paths to status.

So even in a case like that in the major car company, the productivity gains in the responsible-worker factory have not resulted in a change of management methods in the less productive factory.

Melman said that he is not certain why the unproductive system is maintained.

As manual labor is turned over to machines, computers will transform the skills needed on an assembly line from manual to intellectual, and companies must change or fall behind foreign competition, Melman said.

Also at the meeting, the director of the Massachusetts Institute of Technology Laboratory of Computer Science said "Congress is asleep" and that computer data banks must be regulated before it is too late to prevent the penetration of computer networks by criminals and others who have no right to information in the banks.

Michael Dertouzos, said he fears that unregulated data banks could

become a major activity that will be hidden and unchecked until a multi-billion dollar theft awakens people to the need for privacy controls on data banks.

He said one rule should be that no data banks may link up to one another without first giving some guarantees of privacy. For example, he said, data passing between two or more data banks should be coded so that no one from one bank can get access to the information from another without authorization.

He also suggested that the systems be required to have "mandatory audit trails" which leave permanent notes in the computer whenever anyone enters it to gain access to information.